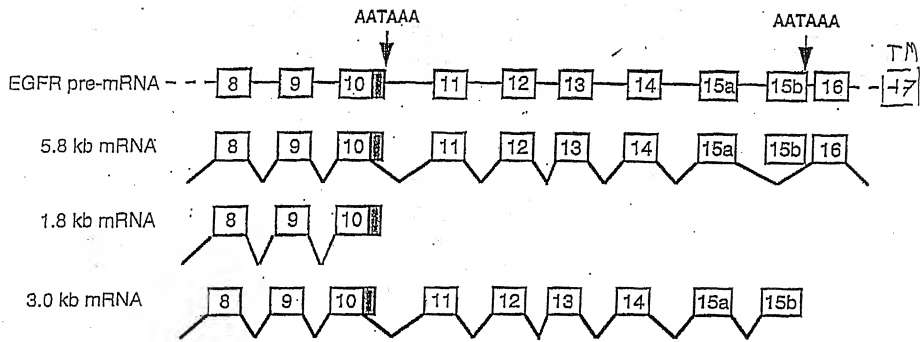
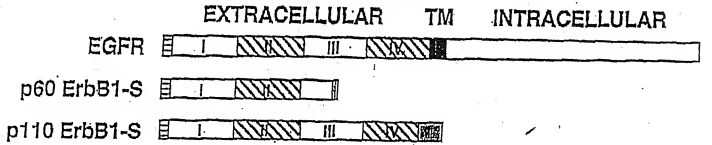

AATAAA
AATAAA
TM
EGFR pre-mRNA
8
9
10
11
12
13
14
15a
15b
16
47
5.8 kb mRNA
1.8 kb mRNA
3.0 kb mRNA

FIGURE 1



p60 ErbB1-S

- encoded by 1.8 kb transcript
- mature product = 60 kDa
- Contains 381 amino acids
  - unique a.a: Leu and Ser
- Calculated mw = 45 kDa
  - minus signal peptide = 42 kDa

p110 ErbB1-S

- encoded by 3.0 kb transcript
- mature product = 110 kDa
- Contains 681 amino acids
  - 78 unique a.a
- Calculated mw = 77 kDa
  - minus signal peptide = 75 kDa

FIGURE 2

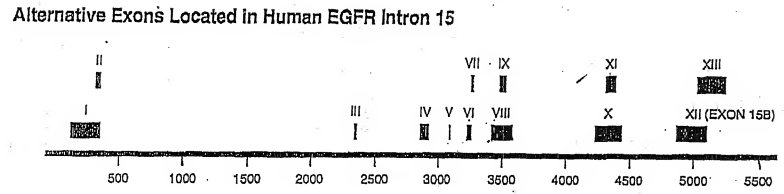

Alternative Exons Located In Human EGFR Intron 15
II
VII
IX
XI
XIII
I
III
IV
V
VI
VIII
X
XII (EXON 15B)
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
Alternative Exons Located In Human EGFR Intron 16
XIV
XV
A431 seq
500
1000
1500

FIGURE 3

Seq ID	Alternative Exons (coding sequence only)	IVS #	Amino Acids	Translated Peptides
Exon 15	cag GGACCAGACAACTGTATCCAGTGTGCCCACTACATTGACGGCCCCCACTG CGTCAAGACCTGCCCGGCAGGAGTCATGGGAGAAAACAACACCCTGGTCTGGAAG TACGCAGACGCCGGCCATGTGTGCCACCTGTGCCATCCAAACTGCACCTACGG SEQ ID NO: 38	NA	53	GPDNCIQCAHYIDGPHCVKTCP AGVMGENNTLVWKYADAGHVCH LCHPNCTYG SEQ ID NO: 21
I	cag CCATGCCAGTAGCAACTTGCTTGTGAGCAGGCCTCAGTGCAGTGGGAATG ACTCTGCCATGCACCGTGTCCCCGGCCGGGCCTGTGTTGTGCAATGCTGCACAT CACAACAGGAGGGTAGGGGGACAAAAGAGCACAGGTCCTGGCAGCTGCCACAGT CTCCAGGGGCTTTTGCGTTTCTCTCCAGATTTCTAAGGTTAACATGGGGATTAG CTGTTTTGCAATGA SEQ ID NO: 39	139-364	74	HASSNLLVSRPQCSGNDSAMHR VPGRACVVQCCTSQQEGRGTKE HRSWQLPQSPGAPAFLSRPLRL TWGLAVLQ* SEQ ID NO: 22
II	cag ATTTCTAAGGTTAACATGGGGATTAGCTGTTTTGCAATGA SEQ ID NO: 40	325-364	12	FLRLTWGLAVLQ* SEQ ID NO: 23
III	tag GAAAACAATCATATAA SEQ ID NO: 41	2342-2357	4	KTII* SEQ ID NO: 24
IV	tag ATGTGCATCAGTATCTCTGCATCAATATCTCTATAATCAGTATCTCTGTGT CAGTGAGCATATGTTGCTGGGCTTAG SEQ ID NO: 42	2857-2932	24	CASVSLHQYLYISYSVSVSCC WA* SEQ ID NO: 25
V	cag GTCCTAA	3086-3092	1	S*
VI	tag TATGTGTGATTACATTCCTGATTCTGAGCCTTTTTAG SEQ ID NO: 43	3229-3265	11	MCDYIPDSEPF* SEQ ID NO: 26
VII	tag ATAG	3266-3269	0	*
VIII	gag TATTTATGACGTGCACAACATTCCTGAATATATTGTCTCTCTCATTTCTC AGATGGGATGTATTGCCTTCTCCATTTCTATTGTTAAAGAAACACTTACAGGGG TTTCTTTAACAACTTGTGAACAGCAGCATCAGAGCCCAGACTACAGCATAAGCA GCTGCTGA SEQ ID NO: 44	3422-3587	54	IYDVHNIPEYIVSLISQMGCIA FSISIVKETLTGVSLTTCEQQH QSPDYSISSC* SEQ ID NO: 27
IX	cag ATGGGATGTATTGCCTTCTCCATTTCTATTGTTAAAGAAACACTTACAGG GGTTTCTTTAA SEQ ID NO: 45	3474-3534	19	WDVLPSPFLLLKKHLQGFL* SEQ ID NO: 28
X	cag AGTTACCGAGGGCCTCATCAGCGTCAGCAGGAGCCCCTCGCCTTCTGACG CTCTCACATCCCTTCTCTCCTGCAGCCCCGTCCTGCCACTGTCCTTGTCCAGCTT CTCTTCAAGGGTCAACTGGTCTACCTTTCCCTACAAGTCTGTCACAGCCTTCTTG TTAGCAATCCCTATGGTTGCCCAAAAGCATTTCAGAGCCTGCATAA SEQ ID NO: 46	4233-4437	67	VTEGLISVSRSPSPSDALTSFS PAAPSCHCPCPASLQGSTGLPF PTSLSQLLVSNPYGCPKAFSEP A* SEQ ID NO: 29
XI	cag CCCCGTCCTGCCACTGTCCTTGTCCAGCTTCTCTTCAAGGGTCAACTGGT CTACCTTTCCCTACAAGTCTGTCACAGCTTCTTGTTAG SEQ ID NO: 47	4307-4394	28	PVLPLSLSSFSSRVNWSTFPYK SVTASC* SEQ ID NO: 30
XII (Exon 15B)	cag GCCAGGAAATGAGAGTCTCAAAGCCATGTTATTCTGCCTTTTTAAACTAT CATCCTGTAATCAAAGTAATGATGGCAGCGTGTCCCACCAGAGCGGGAGCCCAG CTGCTCAGGAGTCATGCTTAGGATGGATCCCTTCTCTTCTGCCGTCAGAGTTTC AGCTGGGTTGGGGTGGATGCAGCCACCTCCATGCCTGGCCTTCTGCATCTGTGA TCATCACGGCCTCCTCCTGCCACTGA SEQ ID NO: 48	4870-5107	78	PGNESLKAMLPCLFKLSSCNQS NDGSVSHQSGSPAAQESCLGWI PSLLPSEFQLGWGGCSHLHAWP SASVIITASSCH* SEQ ID NO: 31
XIII	cag AGTTTCAGCTGGGTTGGGGTGGATGCAGCCACCTCCATGCCTGGCCTTCT GCATCTGTGATCATCACGGCCTCCTCCTGCCACTGAGCCTCATGCCTTCACGTG TCTGTTCCCCCGCTTTCCTTTCTGCCACCCCTGCACGTGGGCCGCCAGGTTC CCAAGAGTATCCTACCCATTTCCTTCCTTCCACTCCCTTTGCCAGTGCCTCTCA CCCCAACTAGTAGCTAA SEQ ID NO: 49	5022-5250	75	VSAGLGWMQPPPCLAFCICDHH GLLLPLSLMPSRVCSPRFSFLP PLHVGRQVPKSILPISFLPLPL PVPLTPTSS* SEQ ID NO: 32
Exon 16	cag ATGCACTGGGCCAGGTCTTGAAGGCTGTCCAACGAATGG SEQ ID NO: 50	NA	13	CTGPGLEGCPTNG SEQ ID NO: 33

FIGURE 4A

XIV	cag ACACACTGCCCAGCAAAGGCAAAAGGGCTTCCTTCAACATCAGCTCTGGC CAGTTTGCCAGAGCAAAGCCCTGAGAAAAGCAAGGTTGAAAAGTCTTATTCAAA CTCACCAGGAAAGAGTGGTGTTACTCTCGATGGCGTCTAGCCAGGAATCATGGA ATTATACACCGAGCACCTGTTTGCCATTTTGGATGTTTCCAAACATGAACCAAA CTTCCAGGCCCCTCTGCCATCTCTGGTAA SEQ ID NO: 51	444-684	79	HTAQQRQKGFLQHQLWFVCQSK ALRKARLKSLIQTHQERVVLLS MASSQESWNYTPSTCLPFWMFP NMNQTSRPLCHLW* SEQ ID NO: 34
XV	cag TGAGCTGCTAGGACACCCAGCAGAACTTCCCCACTCCACACTGCAATCTC AGGGATCTTAG SEQ ID NO: 52	849-909	19	ELLGHPAELPHSTLQSQGS* SEQ ID NO: 35
A431 seq	tag AAGCTACATAGTGTCTCACTTTCCAAGATCATTCTACAAGATGTCAGTGC ACTGA SEQ ID NO: 53	1633-1687	17	SYIVSHFPRSFYKMSVH* SEQ ID NO: 36
Exon 17	cag GCCTAAGATCCCGTCCATCGCCACTGGGATGGTGGGGGCCCTCCTCTTGC TGCTGGTGGTGGCCCTGGGGATCGGCCTCTTCATGCGAAGGCGCCACATCGTTC GGAAGCGCACGCTGCGGAGGCTGCTGCAGGAGAGGGAG SEQ ID NO: 54	NA	47	PKIPSIATGMVGALLLLVVAL GIGLFMRRRHIVRKRTLRRLLQ ERE SEQ ID NO: 37

FIGURE 4B

Co-expression of p170 and p110 EGFR in Chinese Hamster Ovary Cells

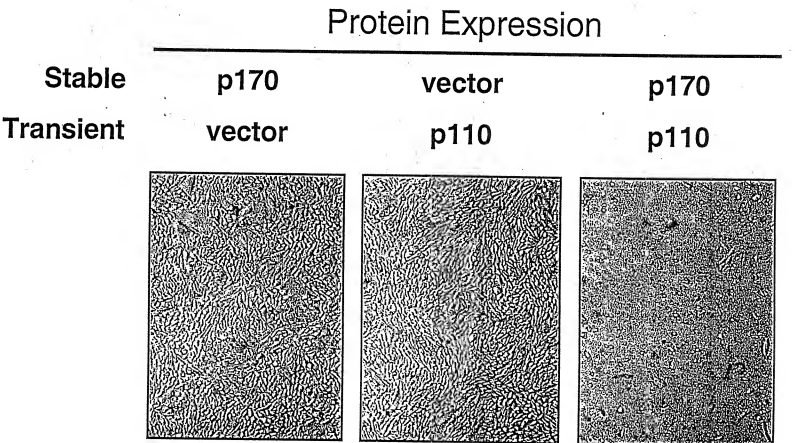
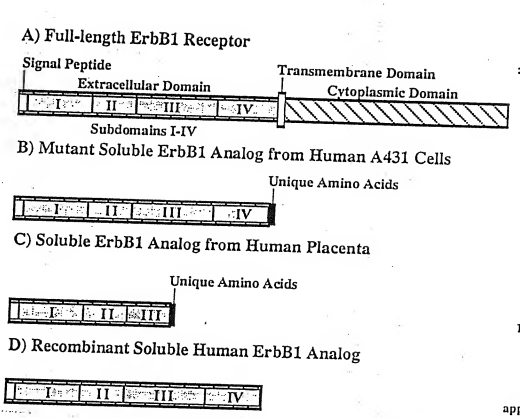


FIGURE 5



	mRNA	# of Unique Amino Acids	Molecular Weight	Reference
A) Full-length ErbB1 Receptor	10.5 & 5.8 kb	none	170 kDa	Ullrich et al., 1984
B) Mutant Soluble ErbB1 Analog from Human A431 Cells	2.8 kb	17	110 kDa	Ullrich et al., 1984
C) Soluble ErbB1 Analog from Human Placenta	1.8 kb	2	60 kDa	Reiter and Maihle, 1996
D) Recombinant Soluble Human ErbB1 Analog	not applicable	none	100 kDa	

FIGURE 6

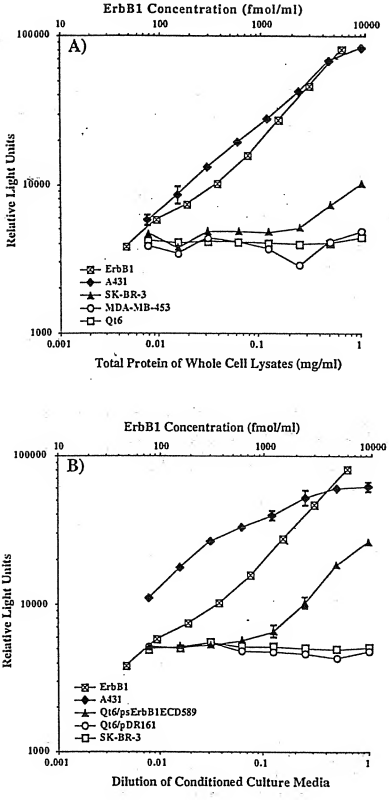

ErbB1 Concentration (fmol/ml)
10
100
1000
10000
100000
A)
Relative Light Units
10000
1000
ErbB1
A431
SK-BR-3
MDA-MB-453
Qt6
0.001
0.01
0.1
1
Total Protein of Whole Cell Lysates (mg/ml)
ErbB1 Concentration (fmol/ml)
10
100
1000
10000
100000
B)
Relative Light Units
10000
1000
ErbB1
A431
Qt6/psErbB1ECD589
Qt6/pDR161
SK-BR-3
0.001
0.01
0.1
1
Dilution of Conditioned Culture Media

FIGURE 7

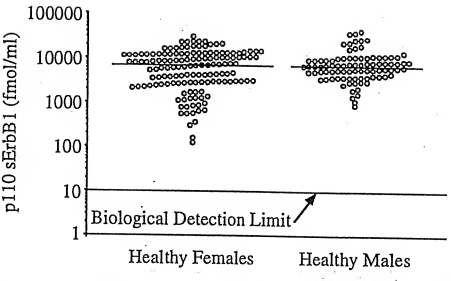

100000
10000
1000
100
10
1
p110 sErbB1 (fmol/ml)
8
Biological Detection Limit
Healthy Females
Healthy Males

FIGURE 8

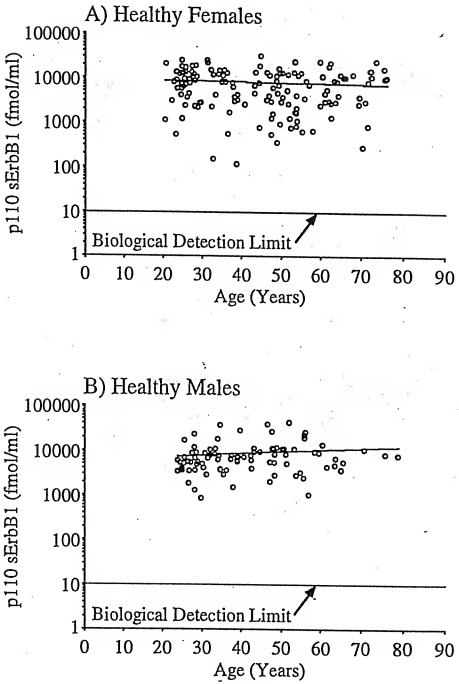

A) Healthy Females
p110 sErbB1 (fmol/ml)
100000
10000
1000
100
10
1
Biological Detection Limit
0 10 20 30 40 50 60 70 80 90
Age (Years)
B) Healthy Males
p110 sErbB1 (fmol/ml)
100000
10000
1000
100
10
1
Biological Detection Limit
0 10 20 30 40 50 60 70 80 90
Age (Years)

FIGURE 9

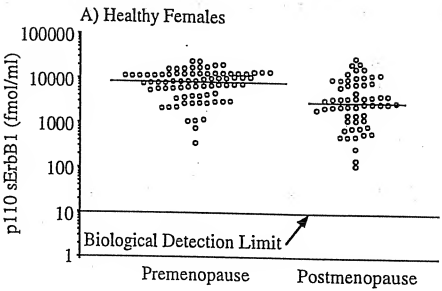

A) Healthy Females
100000
10000
1000
100
10
1
p110 sErbB1 (fmol/ml)
Biological Detection Limit
Premenopause
Postmenopause

FIGURE 10

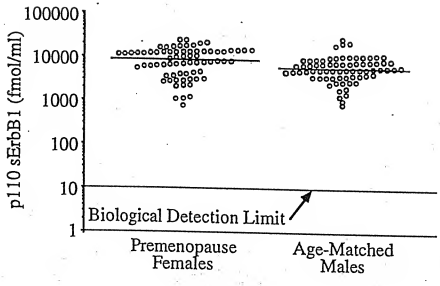
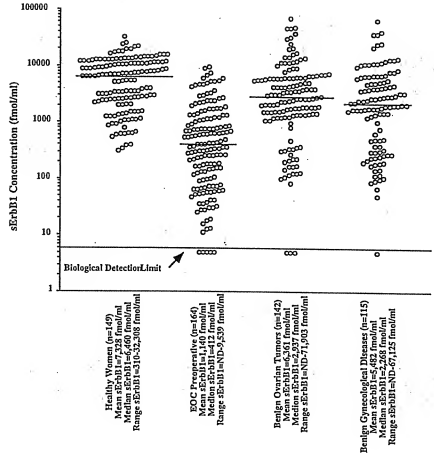

100000
10000
1000
100
10
1
p110 sErbB1 (fmol/ml)
Biological Detection Limit
Premenopause Females
Age-Matched Males

FIGURE 11



Serum sErbB1 levels in healthy women, patients with EOC, benign ovarian tumors, and other benign gynecological diseases as measured by ALISA and compared. Serum samples with sErbB1 levels below the inter-assay biological detection limit (horizontal line with arrow) of 5.89 fmol/ml were arbitrarily assigned values of 5.0 fmol/ml for graphing purposes. Each data point represents the median of the mean sErbB1 concentration for one serum sample tested in duplicate from a minimum of three separate assays. The median sErbB1 concentration for each group of patients is indicated by the horizontal line.

FIGURE 12

FIGURE 13

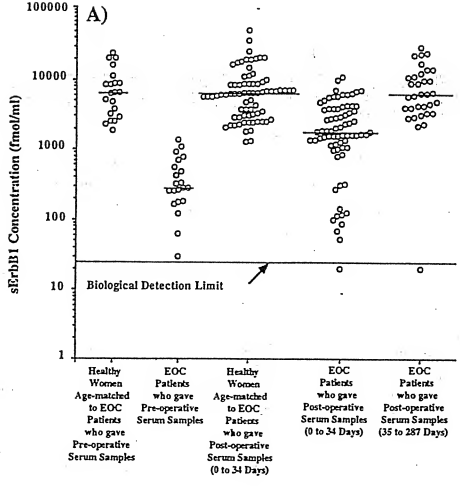

A)
sErbB1 Concentration (fmol/ml)
100000
10000
1000
100
10
1
Biological Detection Limit
Healthy Women Age-matched to EOC Patients who gave Pre-operative Serum Samples
EOC Patients who gave Pre-operative Serum Samples
Healthy Women Age-matched to EOC Patients who gave Post-operative Serum Samples (0 to 34 Days)
EOC Patients who gave Post-operative Serum Samples (0 to 34 Days)
EOC Patients who gave Post-operative Serum Samples (35 to 287 Days)

FIGURE 14

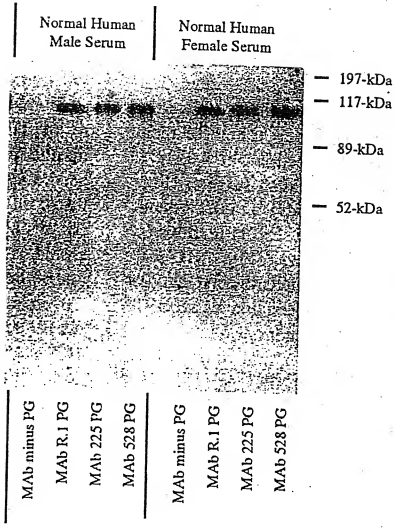
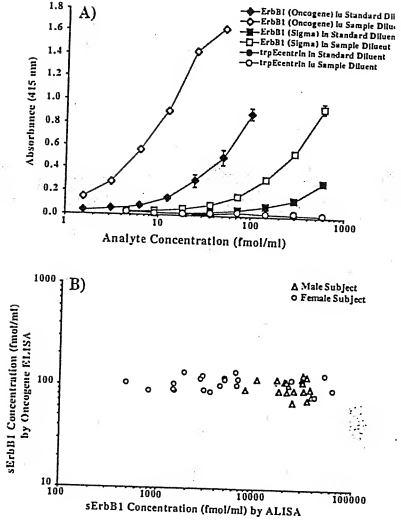

Normal Human Male Serum
Normal Human Female Serum
197-kDa
117-kDa
89-kDa
52-kDa
MAb minus PG
MAb R.1 PG
MAb 225 PG
MAb 528 PG
MAb minus PG
MAb R.1 PG
MAb 225 PG
MAb 528 PG

FIGURE 15


A)
ErbB1 (Oncogene) In Standard Dil
ErbB1 (Oncogene) In Sample Dilu
ErbB1 (Sigma) In Standard Diluen
ErbB1 (Sigma) In Sample Diluent
trpEcentrin In Standard Diluent
trpEcentrin In Sample Diluent
Absorbance (415 nm)
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
1
10
100
1000
Analyte Concentration (fmol/ml)
B)
Male Subject
Female Subject
sErbB1 Concentration (fmol/ml) by Oncogene ELISA
1000
100
10
100
1000
10000
100000
sErbB1 Concentration (fmol/ml) by ALISA